

Appl. No. 10/700,285
Reply Filed: April 17, 2006
Reply to Office Action of: November 16, 2005

REMARKS

In response to the Office Action of November 16, 2005, the Applicant submits this Reply. In view of the foregoing amendments and following remarks, reconsideration is requested.

Claims 1-11 and 13-23 remain in this application, of which claims 1, 4, 6, 7, 8, 13, 16, 18, 19 and 20 are independent. (22 total claims of which 8 are independent). Applicant previously paid for 20 total claims, of which 4 were independent. In the foregoing amendments, claims 1, 6 and 7 have been amended, claim 12 has been cancelled and claims 13-23 have been added.

In the Office Action, claims 1-5 were rejected. Claims 6-11 were indicated as including allowable subject matter. Claims 6 and 7 have been amended to place them in allowable condition.

Cancellation of Claim Withdrawn from Consideration

Claim 12 was previously withdrawn from consideration, and has been cancelled by the foregoing amendment, without prejudice. The enclosed request under 37 C.F.R. §1.48(b) and fee under 37 CFR 1.17(i) are submitted to correct the inventorship of this application.

Rejection Under 35 U.S.C. §102

Claims 1-5, of which claims 1 and 4 are independent, were rejected under 35 U.S.C. §102 in view of U.S. Patent 6,292,589 ("Chow"). The rejection is respectfully traversed.

According to Chow, video compression, such as MPEG video compression, involves classifying encoded frames as "either Intra-coded (I-frames), Predictive frames (P-frames) or Bi-directional frames (B-frames)." Col. 1, lines 38-41. Motion estimation is used to encode the compressed data for the P-frames and B-frames. See Col. 9, line 50 to Col. 10, line 17. A series of input frames is shown in Fig. 5B. Col. 8, line 24. In the example shown in Fig. 5B, frame I₃ 55c is dropped because there is no memory available to store the frame. See Col. 8, lines 63-67. "[B]y dropping the frame at the input to the encoding process, the encoder 37 will encode the input video stream, mine the dropped frame, in the previously dictated GOP pattern, i.e., IBBPBBP. In this way, the process by which the video stream is encoded is not varied for a sequence in which a frame is dropped." Col. 9, lines 10-15.

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According to Chow, if a “frame E was dropped from the video stream, problems may occur when the encoded video is decompressed and viewed.” Col. 9, lines 16-18. Chow describes two alternative methods for solving this problem. First, the encoder may “insert accurate time stamp information into the resulting MPEG stream and simply not encode the missing frame.” Col. 9, lines 19-21. With this first method, “[i]n a decoder which references the time stamps . . . , the missing frame would be handled correctly.” Col. 9, lines 21-23. Alternatively, a “synthetic frame should be inserted into the video stream.” Col. 9, lines 34-35. A synthetic frame is either a B frame that is “identical to the reference frame nearest to where in the video stream the original frame was dropped” or a P frame that is “identical to the reference frame which precedes it in the video stream.” See Col. 9, lines 37-41. These techniques permit the video to be synchronized with its corresponding audio. See Col. 9, lines 24-26 and 34-36.

Referring now to claim 1, this claim has been amended to clarify that motion compensated interpolation involves warping and blending the images from the first and second sequences to generate the output image. Similar language is found in allowable claims 6 and 7.

Accordingly, the rejection of independent claim 1 is traversed. Claims 2 and 3 are dependent claims that are allowable for at least similar reasons.

In addition, claim 2 recites “dissolving the audio associated with the first sequence to the audio associated with the second sequence.” In cited portion of Chow (Col. 9), there are two methods for processing the video to retain its synchronization to the audio, and the one specifically referred to in the Office Action (Col. 9, lines 27-36) involves adding a synthetic frame to replace the dropped frame of video. The cited portion of Chow has nothing to do with “dissolving the audio associated with the first sequence to the audio associated with the second sequence.”

In addition, claim 3 recites “adjusting the duration of the audio to match the duration of the output sequence of images.” In the cited portion of Chow (Col. 9, lines 14-26), Chow merely refers to using time stamps to maintain the video and audio in synchronization. The cited portion of Chow has nothing to do with “adjusting the duration of the audio to match the duration of the output sequence of images.”

Referring now to claim 4, claim 4 recites “processing the corresponding audio to identify an audio break between the audio corresponding to the first segment and the audio corresponding to the second segment.” In contrast, the cited portion of Chow, Col. 9, lines 14-36, merely

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mentions a decoder that decodes audio. Two methods are described for processing the video to ensure that the video and the audio stay in synchronization. There is no mention in the cited portion of Chow of any processing of the audio to identify an audio break, as claimed.

Accordingly, the rejection of independent claim 4 is traversed. Claim 5 is a dependent claims that is allowable for at least similar reasons.

In addition, claim 5 recites "dissolving the audio associated with the first sequence to the audio associated with the second sequence around the audio break". In cited portion of Chow (Col. 9), there is no audio break, but merely a dropped video frame. The techniques described in column 9 of Chow are two methods for processing the video to retain its synchronization to the audio. The cited portion of Chow has nothing to do with "dissolving the audio associated with the first sequence to the audio associated with the second sequence around the audio break".

Accordingly, the rejection of claims 1-5 is traversed.

Allowed Claims

In the Office Action, claims 6-11 were indicated as including allowable subject matter. In particular, claims 8-11 were allowed. Claims 6 and 7 have been amended to place them in independent form.

New Claims

New claims 13-23 are computer program product claims that correspond to claims 1-11 and are allowable for at least similar reasons.

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CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this reply, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, please charge any fee to **Deposit Account No. 50-0876**.

Respectfully submitted,

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